

## **Douglass Developmental Disabilities Center: An ABA Program for Children and Adults with Autism Spectrum Disorders**

*Jan S. Handleman and Sandra L. Harris*

### **Abstract**

There is increasing evidence that Applied Behavior Analysis (ABA) is an effective, and often superior, method to teach children with Autism Spectrum Disorders (ASD), than other methods. The Douglass Developmental Disabilities Center of Rutgers University (DDDC) has been using ABA for more than thirty years to teach toddlers, young children, adolescents and adults with ASD. The DDDC is a multi-division center that blends research and clinical applications in ABA, and provides teaching and training opportunities for the University and general public. Preliminary outcome data support the effectiveness of ABA in changing the lives of the students that the DDDC serves in a very positive way.

Keywords: Applied Behavior Analysis, Autism Spectrum Disorders, Education.

---

The Douglass Developmental Disabilities Center (DDDC) was authorized by the Board of Governors of Rutgers, The State University of New Jersey, in 1972. The DDDC is approved by the New Jersey State Department of Education, the New Jersey Department of Health and Senior Services, and the New Jersey Department of Human Services to provide services to individuals with Autism Spectrum Disorders (ASD), their families and the professionals who serve them. From the start we operated from the assumption that disorders on the autism spectrum are caused by a biochemical, genetic, or neurological deficit and that the focus of treatment must be on teaching individuals to compensate for the effects of the disorder. As presented in this paper, the DDDC is an ABA (Applied Behavior Analysis) program, that uses the science-based principles of ABA to organize the delivery of comprehensive services that are designed to meet the needs of individuals throughout their lives. Together with a highly trained and credentialed staff, the DDDC works collaboratively with the families of the children and adults who are served, and with the agencies that fund their education and training. As a university-based program, there is also a strong commitment to educating undergraduate and graduate students; disseminating knowledge through research; training and consultative services; and furthering the understanding of the nature and treatment of ASD by the professional community and the general public.

### **The Nature and Needs of Students with an Autism Spectrum Disorder**

A variety of terms including autism, autistic, and autism spectrum disorder are used to refer to people whom the American Psychiatric Association (2000) describes as having Pervasive Developmental Disorders (PDD). For purposes of consistency we will use Autism Spectrum Disorder (ASD) to encompass this group of individuals except when writing specifically of the *Diagnostic and Statistical Manual of Mental Disorders – Text Revision (DSM-IV TR*; American Psychiatric Association, 2000) in which case we will refer to PDD. According to the *DSM-IVTR* (American Psychiatric Association, 2000) PDD includes Autistic Disorder, Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS), Asperger's Disorder, Childhood Disintegrative Disorder, and the related disorder of Rett's Syndrome. Each condition differs with respect to the presence of specific characteristics in the areas of communication, social development, behavior and activity. Consideration of this perspective is important, in order to understand the organizational structure of the DDDC and the various services that are provided.

The Pervasive Developmental Disorders are neurobiological syndromes, which are present at a very young age and effect fundamental behaviors such as the ability to communicate, social responsiveness, and the establishment of relationships with others. Neurobiological factors appear to contribute to the etiology of these conditions although specific markers have not yet been identified (Dykens & Volkmar, 1997). Experienced professionals can reliably make the diagnosis of Autistic Disorder in two-year-olds; however, screening instruments for children younger than two have not yet been fully validated (Handleman & Delmolino, 2005). The incidence of PDD ranges from 10 to 15 per 10,000, with higher estimates being reported; and the current literature describes a lifelong pattern of strengths and challenges. While a large portion of the research on these conditions focuses on the younger child, recent writings describe the challenges that older children and adults continue to face in day-to-day living (Cohen, in press). As described in the following pages, the range of programs at the DDDC, from toddler to adult, reflects this lifelong nature of autism.

There is no known cure for conditions on the spectrum of autism and specialized education is currently the single most effective intervention available to promote social responsiveness and personal independence by individuals with one of these diagnoses (Handleman & Harris, 2001). Inconclusive evidence indicates that some medications may treat specific and troubling symptoms such as compulsive behavior or aggression, but not the disorder as a whole; and medication, when effective, only serves as an adjunct to effective education (Tsai, 2005). In addition, a number of medical interventions involving special diets, vitamins and hormones may also play an adjunctive role to educational efforts for some persons (Dykens & Volkmar, 1997), although the research here is not conclusive.

The education of students on the autism spectrum should begin with the possible earliest diagnosis, and remain available as the child matures, and for many, enter adulthood. Educational programs should include goals in the areas of cognitive ability, social responsiveness, verbal and non-verbal communication, and the reduction of challenging behaviors. The DDDC curriculum includes these components, and maintains that the generalization and maintenance of behavior change should also be considered critical criteria for educational progress. Educational efforts should also span school, home and community settings and parents and professionals should collaborate in educational planning. The families of children with ASD face extraordinary challenges and require services that can support educational efforts and family functioning (Harris & Handleman, in press). They can also serve as partners in the education of their children when they are provided with necessary supports. The importance of this partnership has driven the DDDC's mission since the early 1970's.

Approaches to the education of students with ASD reflect either a developmental or behavioral orientation. In order for the individual on this spectrum to make meaningful educational gains, The National Research Council of the National Academy of Science (2001) proposes the following program quality indicators: (a) specific curricula, (b) highly supportive instructional environments, (c) maintenance and generalization strategies, (d) predictable routines, (e) functional behavior management procedures, (f) systematic transitional planning, (g) collaborative family involvement, (h) family supports, (i) low student-to-staff ratios, (j) highly trained staff, (k) comprehensive professional resources, and (l) staff supervision and program review mechanisms. Each of these elements is part of the service delivery model at the DDDC.

Of the available educational interventions for students with ASD, Applied Behavior Analysis is the most widely used and scientifically validated educational approach (Green, 1996). Thirty years of experience and thousands of research investigations support the efficacy of ABA for these students. The ABA approach includes specific techniques to help the student acquire or change behaviors and reflects each of the National Research Council's quality indicators. ABA has proven to be effective for learners across the life span and is equally implemented in early intervention, elementary, secondary and adult programs.

There are center - school - and home-based ABA models for the education of students with ASD, each including school, home and community components. Each of these program types is offered at the DDDC, which provide the hallmarks of an ABA program, such as a full day of systematically planned school and home experiences that are provided 12 months a year with primarily one-to-one instruction and supported small group programming. A highly trained staff that receives ongoing supervision and technical assistance implements ABA interventions at the DDDC. A national credentialing program for Board Certified Behavior Analysts (BCBA) is growing and an increasing number of professionals are becoming certified at ours and other ABA programs across the country.

Efforts to diagnose and treat individuals with ASD are rapidly advancing. Until these disorders can be prevented or cured, scientifically based educational interventions are significantly helping students to achieve their potential for the most independent and productive lives that are possible. While outcome data at the DDDC and other programs continue to be gathered, research regarding ABA programs reports that increasing numbers of children on the autism spectrum are being successful in some degree of inclusive education after receiving early intensive programming (Harris & Handleman, 2000). The reports for older children are equally as promising, as more and more individuals are able to lead productive lives as adults with varying and decreasing levels of supervision and support (Cohen, in press). Our own experience at the Douglass Developmental Disabilities Center confirms these reports.

### **Service Delivery at the Douglass Developmental Disabilities Center**

As an ABA program, the DDDC's service delivery model includes: a) data-based decision-making; b) well-trained and certified staff; c) use of science-based strategies; d) programming that spans school, home and community settings; e) continuous provision of intensive learning opportunities; f) systematic assessment of the environment; g) competency-based staff training and supervision; and h) parent training and support to promote collaboration and advocacy. In order to implement these components of the program, the DDDC uses individually determined strategies that include, but are not limited to: a) strategic and contingently applied reinforcement, b) functional assessment, c) antecedent interventions, d) positive behavioral supports, e) functional communication training, f) discrete trial instruction, g) naturalistic teaching including incidental teaching (Hart & Risely, 1968), pivotal response training (e.g., Koegel, Koegel, Harrower, & Carter, 1999) and similar strategies, h) fluency-based intervention (Binder, 1996), i) task analysis, j) community programming, k) augmentative communication, l) interventions using the language classification system of Verbal Behavior (Sundberg & Partington, 1998), and m) other data-based, empirically validated treatment strategies. Following the initial assessment of a student, goals are determined and progress measured according to data-based criteria.

Children are typically referred to DDDC as preschoolers by Child Study Teams, parents, physicians, or other professionals. In January and February of each year, a projected number of openings is determined and admission interviews are scheduled. Following a review of each applicant's medical and educational records, children who appear suitable for the Center are invited for a screening. Screenings are preliminary evaluations, usually in a group setting, where parents are also encouraged to observe the classes where openings are anticipated, in order to make an informed decision.

Screening typically last 30 minutes, during which time 2 to 4 children are observed in a semi structured setting by a multidisciplinary team. Staff expose the children to a variety of toys, educational materials and social stimuli and observe their responses. Screenings are useful in ruling out children whose paper credentials appear consistent with the diagnosis of autistic disorder, but who are socially more responsive to support that diagnosis, or whose degree of developmental delay makes a diagnosis ambiguous.

Based on the results from the screening, children who appear most appropriate for the anticipated openings are invited to an in-depth intake evaluation. This evaluation includes a detailed interview with the parents to obtain a developmental history; administration of the *Autism Diagnostic Interview* (ADI; Lord, Rutter, & LeCouteur, 1994), the *Autism Diagnostic Observation Schedule* (ADOS; Lord, Risi, et al., 2001), and the *Preschool Language Scales-Third Edition* (PLS-3; Zimmerman, Steiner & Pond, 1992), and a classroom observation. At the conclusion of this evaluation a team of Center staff (i.e., administrator, psychologist, teacher, speech therapist) meet to decide whether our openings are suitable for the candidate's needs. If more data are required in order to make a placement decision, a home visit might be conducted or the Center staff will speak to other professionals who know the child. Following admission, the child is evaluated the Center's curriculum checklist; and the ADOS and ADI are repeated annually.

Every child who is admitted to the Center must have a complete medical examination and most children come to us with pediatric and neurological evaluations, audiometric assessments and other related tests. School-age children who enter the Center's upper school are typically graduates from the preschool and have been previously evaluated.

The Executive Director, a clinical psychologist, and the Director, who holds a doctorate in special education, attend to administrative issues and supervise the delivery of services and activities by each of the four Divisions (Division of Outreach Services, Division of Adult and Transitional Services, Division of Educational Services, Division of Research and Training) and the School Program. Each division Director consults with the Executive Director and the Director of the Center in planning and implementing major policy decisions related to clinical practice, Rutgers University procedures and government regulations. The Directors of the Divisions collaborate with their Assistant Directors on daily operations and supervise all direct service staff. Currently, each Director and Assistant Director is a Board Certified Behavior Analyst (BCBA and in one case BCABC). Each Division also has Coordinators who support the efforts of the senior administrators. The Executive Director, Director, Directors of the Divisions, Assistant Directors, and the Business Manager make up the Development Committee, and meet monthly to review policies, procedures and clinical issues. The Directors of the Divisions also attend a monthly group meeting and meet individually with the Director of the Center, to discuss the operations of the Center.

Professional development is a hallmark of the DDDC. Teachers, assistant teachers, speech therapists, home-school consultants, program coordinators, consultant-tutors, developmental interventionists, and job coaches all participate in year-round professional development activities. Initial staff training occurs each fall, with additional training provided through in-service activities (e.g., quarterly seminars and monthly round table discussions) and required attendance at yearly workshops and conferences including the annual statewide conference on autism that is sponsored by the New Jersey Center for Outreach and Services for the Autism Community (COSAC). Recent topics for inservice training have included fluency-based training (Binder, 1996), the Verbal Behavior classification system for language instruction (Sundberg & Partington, 1998) and the Picture Exchange Communication System (Frost & Bondy, 2001). The ABA training literature is quite clear that workshops and lectures are ineffective without the added competent of feedback and supervised practice (Harris, LaRue & Weiss, in press). As a result, following these introductory workshops there is follow-up in the work setting to provide supervision as staff members become fluent in the new technology.

Many of the senior staff speak at the DDDC annual conference for public school educators; have co-authored posters and research papers; and have presented at local, state, and national conferences. The academic faculty members at the DDDC, in conjunction with the Graduate School of Applied and Professional Psychology at Rutgers University offer graduate level ABA courses and continuing

educational opportunities that are required for certification as a Behavior Analyst (BCBA) and New Jersey teacher certification. All teachers and speech therapists hold New Jersey State certification. In addition, all staff members are encouraged to pursue certification as a Behavior Analyst and many staff hold BCBA or BCABA credentials.

The four Divisions of the DDDC and the School Program serve children and adults with ASD (See Appendix A. The Division of Outreach Services provides a variety of school, home and center-based services for children as young as 2 years; and the Division of Adult and Transitional Services offers a program for adults. The Division of Educational Services provides various supports to the School Program; and the Division of Research and Training has the responsibility to ensure the integrity of the ABA programming at the DDDC.

The DDDC serves approximately 250 students, families and school districts; and employs 90 full-time staff, and an equal number of part-time employees. Five graduate students in Clinical and School Psychology receive support from the Center, and approximately 100 undergraduate students work in the classrooms each year. Seventy-five graduate students are enrolled in ABA courses leading to the board certification, and approximately 1,000 parents and professionals attend our conferences and seminars.

#### **Division of Outreach Services**

The Division of Outreach Services provides high quality educational, training and consultation services to individuals on the autism spectrum, their families and the professional community. The Division currently has contracts with 60 School Districts and is providing home-based services to 75 families. The Division employs experienced staff and consultants to provide school-, home-, and center-based services. In addition, the Division does various evaluations, and provides early intervention services.

The Division of Outreach Services offers a variety of school-based services. For example, Division staff members consult to educational programs for individual students or entire classes; train professional staff; conduct behavioral observations; provide evaluations and monitor school programs; and offer a social skills training program. Home-based services include educational programs, parent training, tutoring, speech therapy, consultation, IEP (Individual Educational Program) development, and behavioral observations. The Division offers a number of center-based services, such as specialized instructional programs, and mentoring for certification as a Behavior Analyst. The Division of Outreach Services also offers evaluations including psycho-educational assessments, functional behavioral assessments and psychiatric evaluations. In addition, early interventions services include home instruction, parent training, speech therapy, IFSP (Individual Family Service Plan) planning, and transition planning.

#### **Division of Adult and Transitional Services**

The Division of Adult and Transitional Services offers a structured environment for adults with a diagnosis on the autism spectrum (most commonly autistic disorder with co-occurring mental retardation) that promotes mutual respect and a sense of competency and support. Currently there are 18 adults enrolled in the program. The staff is committed to providing programming that is designed to promote individual growth and the development of skills that are necessary to be active, engaged and participating members of society. They believe that individuals on the autism spectrum have the following rights: a) to lead a normalized life; b) to achieve their fullest potential; c) to effective treatment; d) to utilize skills attained during their school age years; and e) to enjoy a life of quality in an environment where individual preferences, choices and desires are respected.



The program for adults provides opportunities designed to promote a full and productive life in the areas of employment, life-skills and community integration. In the area of employment, the Division of Adult and Transitional Services offers in-house paid employment and supported work in the community. Some of the job-related experiences include piecework mailings and clerical jobs, and some of the job sites include local eateries, supermarkets and University departments. Life skills programming focuses on skills that lead to increased independence, promote self-awareness and functional adult life, and emphasize the use of functional language. Personal safety skills, appropriate dress and meal preparation are some of the skills that are taught. The Division of Adult and Transitional Services also provides instruction that promotes adaptive functioning in community settings.

### **Division of Research and Training**

The Division of Research and Training (R&T) supports each of the Center's Divisions. R&T is responsible for the development, implementation and evaluation of research carried out at the DDDC and ensures that all research activities are conducted within the guidelines of the Institutional Review Board of the Office of Research and Sponsored Programs at Rutgers University. Families of students at the Center and from the community are invited to participate in research projects, but participation is not required to receive services from the DDDC. The Division also conducts all training activities for DDDC staff, and offers training and continuing education activities for the University and general communities. R&T provides behavioral consultation services to all programs at the DDDC. For example, all behavior intervention plans are designed and monitored by this Division. The Division of Research and Training currently has 5 faculty members, and two full-time and five part-time staff members.

The Division of Research and Training is committed to ensuring the integrity of ABA applications at the DDDC, and is involved in the following activities: a) conducting applied research comparing various educational interventions; b) collaborating with other agencies and other University faculty; c) providing leadership in state, national and international organizations; d) publishing in books and journals; e) presenting at state, national and international conferences; f) conducting annual conferences and training institutes; g) providing inservice training activities for DDDC staff; g) offering ABA courses and continuing education for certification as a Behavior Analyst; h) providing practicum experiences for graduate students in Clinical and School Psychology; i) offering graduate assistantships for graduate students in Clinical and School Psychology; j) offering a Field Work course for undergraduate students in Psychology and Special Education; k) offering a research course for undergraduate students; and l) providing behavioral consultation and assessment services.

### **Division of Educational Services**

The Division of Educational Services provides administrative support to the DDDC programs. The Division is actively involved with many aspects of the School Program, and works closely with the Division of Research and Training. Some of the major responsibilities of the Division of Educational Services are: a) coordinating the development of the Annual Professional Development Plan for Teachers and School Leaders; b) ensuring that certified staff meet the New Jersey State Standards for Highly Qualified Status; c) coordinating staff performance evaluations for the School Program; d) collaborating in curriculum development; e) ensuring that staff training experiences meet State Regulations for Teachers and Educational Services Personnel; f) coordinating New Jersey State Testing, including Alternate Proficiency Assessments; g) ensuring compliance with governmental regulations; and h) acting as a liaison to the parent-teacher organization, DOORS (Douglass Organization for Occupational and Related Educational Services).

### **The School Program**

The School Program is the original, founding program of the DDDC, and serves 61 children, ages 3 to 21, who are diagnosed with an autism spectrum disorder, primarily Autistic Disorder. In addition there is one specialized class for adolescents with Asperger's Disorder. The 12 classes in the School Program use intensive, individualized methods that feature the development, generalization and maintenance of communication, social skills, functional academics, life skills, and prevocational skills. The classes are staffed with certified teachers and speech therapists, highly trained paraeducators, and undergraduate students enrolled in a Field Work course.

The School Program uses a systematic ABA curriculum (Romanczyk & Lockshin, 1982) and includes the *Core Curriculum Content Standards* set by the New Jersey State Department of Education (2004). Goals for preschool students are selected according to the *New Jersey State Preschool Teaching and Learning Expectations: Standards of Quality* (2004). The Verbal Behavior classification system (Sundberg & Partington, 1998) is used as a framework to guide language instruction.

A full range of ABA strategies is used in the School Program and includes, but is not limited to: strategic use of discrete trial instruction; natural environmental teaching to increase initiation, spontaneity and generalization; incidental teaching to support the naturalistic use of language and social skills; and fluency-based instruction to ensure the smoothly integrated use of skills. Functional behavioral assessment guides the development of behavior intervention plans. Each class in the School Program draws on all of the DDDC's resources and supports, particularly the services of the Division of Research and Training to ensure that educational programming is science-based and state-of-the-art.

Family involvement is a critical element in the effective education of the students at the DDDC and parents are viewed as valuable partners in their child's education. Support and training for family members include education, collaborative goal setting, parent and sibling support groups, regularly scheduled meetings, classroom observations, in-home consultation, informational resources, and community service referrals. The parent-teacher association, DOORS, provides a Saturday social skills group and an after school program that offers students the opportunity to have community-based social, recreational and leisure experiences.

The School Program operates in three settings: the Douglass School, the Elementary Satellite and the Secondary Satellite.

#### *The Douglass School*

*Preschool.* There are three classes for children of preschool age in the School Program. The first class, the *Prep* class, uses one-to-one teaching to develop readiness skills, interpersonal awareness, social responsiveness and language skills. The second class, *Small Group Preschool*, prepares students for paired and small group instruction. The third class, named *Small Wonders*, is an integrated setting for six students with autism and seven or eight typically developing peers. This environment is more natural by design, offering small and large group programming and a strong transition component and preparation for less specialized settings.

*Upper School.* There are four classrooms for older students, ages six to twenty-one. These classes emphasize the development of communication and the remediation of behavioral concerns, while maintaining an emphasis on functional academics, community and leisure skills, and prevocational training. The classes provide paired and small group instruction, however, more individualized supports can be provided if required. University and community-based work opportunities are available. The Upper School also provides transitional planning for postsecondary placements.

### *Elementary Satellite*

The Elementary Satellite of the School Program consists of two classes that provide one-to-one instruction for young children at the early elementary level who are being prepared for placement in other less specialized settings. The curriculum focuses on instructional readiness skills, communication and social responsiveness. Systematic transitional planning is also emphasized.

### *Secondary Satellite*

The Secondary Satellite provides a specialized class for adolescents on the autism spectrum who display very substantial behavior problems that preclude their being placed in other, less restrictive educational settings. These students all have significant, long standing challenging behaviors such as aggression or self-injury and they have not responded favorably to previous treatment efforts.

The Secondary Satellite also has a class for students with average or above average intellectual functioning and a diagnosis of Asperger's Disorder, who engage in challenging behavior that precludes placement in a less restricted setting. As part of the program, these students have the opportunity to work toward their GED in preparation for postsecondary experiences.

### **Outcome**

The most recent empirical indications of outcome at the DDDC are based on the preschool program, and reported in Harris and Handleman's (2000) four-to-six-year follow-up of 27 children. These children entered the preschool program with a mean age of 49 months and graduated with a mean age of 142 months. Their mean scores on the Childhood Autism Rating Scale (CARS; Schopler, Reichler, DeVellis, & Daly, 1988) was 34.17 with most children falling in the mild to moderate range of autism; and their mean IQ on the Stanford Binet (Thorndike, Hagen, & Sattler, 1986) at intake was 59. Based on follow-up questionnaires from the children's school districts we found that of 13 children who began the program at age 48 months or less, all but three were in regular education classes (with or without support) and among the 14 who entered the program at 50 months or older, all but one child was in special education classes. The IQ's of the children were also related to their post preschool placements. Children who were admitted with higher IQ's (mean=81) were most likely to attend regular education classes after graduation from the program. Children who displayed lower IQ's and were placed in special education classes also showed measurable gains in IQ (mean=46 at admissions; mean=59 at graduation).

Follow-up of students who leave the Upper School classes and the two Satellite classes is more complex. Varying lengths of stay, degree of autistic involvement, and continuing mental retardation make for less striking changes in these children than is true for some preschool aged youngsters who may ultimately function independently in a fully included setting. Nevertheless, older students who have graduated from these settings have positive outcomes in that they have moved to less restrictive programs or entered job training programs.

The goal of the Upper School program is to prepare students for independent, productive living in the least restrictive environment. Finding appropriate placements for them as they approach adulthood is a challenging task. For example, community services and supports for adults on the autism spectrum are much less adequate than those for preschool and school aged students. In the last ten years, 9 students graduated from the Upper School program and were admitted to our Adult Program. One graduate is now employed at a local restaurant, and 8 are working at least three days a week in local businesses. In



addition, since 1994, 2 students in the Upper School successfully transitioned to public school settings, and 4 were enrolled in other specialized schools. One student now attends a residential program.

Because placements in the Elementary Satellite Classes are short term and typically do not last longer than 4 to 5 years, there is an emphasis on transition to less restrictive settings. In the last five years, 4 students have entered programs in their local public school districts, 2 were enrolled in the DDDC Upper School classes and 1 was admitted to a private school for children with a range of disabilities.

Outcome for students in the Secondary Satellite program can currently be best measured in terms of the impact on the quality of life. For example, one student, who once caused serious staff injuries, is now able to go into the community on a regular basis to eat at a fast food restaurant; shop for food; and to use the University's recreational facilities. Another student, who smeared feces and urinated on school property, as well as on staff, is now able to go to the beach, and to go into the community to purchase food.

Recognizing the limitations of our current outcome data, the DDDC has embarked upon a comprehensive data-based tracking of graduates, in order to provide a more systematic look at the range of outcomes for our students, and the variables that influence successful inclusion in public education settings. Preliminary data should be available for analysis in approximately one year.

### In Closing

The Douglass Developmental Disabilities Center, through the application of a broad range of ABA instructional methods by well trained and supervised professional staff members, strives to change the lives of people with autism spectrum disorders in meaningful ways and to promote the most independent and productive life that is possible. Most of our students achieve these goals. More than 30 years of service delivery at the DDDC has confirmed the substantial research documenting the effectiveness of ABA for students with ASD. While progress varies, most students show meaningful changes.

### References

- American Psychiatric Association (2000). *The diagnostic and statistical manual of mental disorders IV* (Text Revision). Washington, DC: Author.
- Binder, C. (1996). Behavioral fluency: Evolution of a new paradigm. *The Behavior Analyst*, 19, 163-197.
- Cohen, M. (in press). Negotiating the school years and preparing for adulthood. In J. S. Handleman & S. L. Harris (Eds.). *School age education programs for children with autism: The in between years*. Austin TX: Pro-Ed.
- Dykens, E.M., & Volkmar, F.R. (1997). Medical conditions associated with autism. In D. Cohen & F. Volkmar (Eds.). *Handbook of autism and pervasive developmental disorders*. (2<sup>nd</sup> ed.) (pp388-407). New York: Wiley.
- Frost, L., & Bondy, A. (2001). *The Picture Exchange Communication System* (2<sup>nd</sup> ed.). Newark DE: Pyramid Products, Inc.

- Green, G. (1996). Early behavioral intervention for autism. In C. Maurice, G. Green, & S. Luce (Eds.). *Behavioral intervention for young children with autism: A manual for parents and professionals*. Austin, TX: Pro-Ed.
- Handleman, J.S., & Delmolino, L. (2005). Assessment of children with autism. In D. Zager (Ed.). *Autism Spectrum Disorders-Third Edition*, (pp.266-293). Mahwah NJ: Lawrence Erlbaum Associates.
- Handleman, J.S., & Harris, S.L. (2001). Preschool programs for children with autism. In J. Handleman & S. Harris (Eds.). *Preschool education programs for children with autism*. Austin TX: Pro-Ed.
- Hart, B., & Risely, T.R. (1968). Establishing use of descriptive adjectives in the spontaneous speech of disadvantaged preschool children. *Journal of Applied Behavior Analysis*, 1, 109-120.
- Harris, S. L., & Handleman, J.S. (in press). An introduction to school age programs for children with autism. In J. S. Handleman & S. L. Harris (Eds.). *School age programs for children with autism: The in between years*. Austin TX: Pro-Ed.
- Harris, S. L., & Handleman, J. S. (2000). Age and IQ at intake as predictors of placement of young children with autism: A 4-6 year follow-up. *Journal of Autism and Developmental Disorders*, 30, 137-142.
- Harris, S. L., LaRue, R. & Weiss, M.J. (in press). Programmatic issues. In P. Sturmey & A. Fitzer (Eds.). *Autism Spectrum Disorders: Applied Behavior Analysis, Evidence and Practice*. Austin TX: Pro-Ed.
- Koegel, L. K., Koegel, R. L., Harrower, J. K., & Carter, C. M. (1999). Pivotal response intervention I: Overview of approach. *Journal for the Association for the Severely Handicapped*, 24, 174-185.
- Lord, C., Rutter, M., DiLavore, P. C., & Risi, S. (2001). *Autism Diagnostic Observation Schedule*. Los Angeles CA: Western Psychological Services.
- Lord, C., Rutter, M., & LeCouteur, A. (1994). Autism Diagnostic Interview – Revised: A revised version of a diagnostic interview for caregivers of individuals with possible pervasive developmental disorders. *Journal of Autism and Developmental Disorders*, 24, 659-685.
- National Research Council. (2001). *Educating children with autism*. Washington, DC: National Academy Press.
- New Jersey Department of Education (2004). *New Jersey core curriculum content standards*. [www.state.nj.us/education/](http://www.state.nj.us/education/).
- New Jersey Department of Education (2004). *New Jersey preschool teaching and learning expectations: Standards of quality*. [www.state.nj.us/education/](http://www.state.nj.us/education/).
- Romanczyk, R., & Lockshin, S. (1982). *The I.G.S. Curriculum*. Vestal, NY: CBTA.
- Schopler, E., Reichler, R. J., DeVellis, R. F., & Daly, K. (1988). *The Childhood Autism Rating Scale*. Los Angeles, CA: Western Psychological Services.
- Sundberg, M. L. & Partington, J. W. (1998). *Teaching language to children with autism and other developmental disabilities*. Pleasant Hill CA: Behavior Analysts, Inc.

Thorndike, R.L., Hagen, E.P., & Sattler, J.M. (1986). *Stanford-Binet Intelligence Scale*. Itasca, IL: Riverside Publishing.

Tsai, L. Y. Medical treatment in autism. (2005). In D. Zager (Ed.). *Autism Spectrum Disorders. Identification, Education and Treatment*, (pp. 395-492) Mahwah NJ: Lawrence Erlbaum Associates.

Zimmerman, I.L., Steiner, V.G., & Pond, R.E. (1992). *Preschool Language Scales-Third Edition*. San Antonio: Psychological Corporation.

Author Contact Information:

Jan S. Handleman, Ed.D.  
Director & Professor  
Douglass Developmental Disabilities Center  
Rutgers, The State University of New Jersey  
151 Ryders Lane  
New Brunswick, NJ 08901  
(732) 932-4500  
jansheldon@aol.com

Sandra L. Harris, Ph.D.  
Executive Director & Professor  
Douglass Developmental Disabilities Center  
Rutgers, The State University of New Jersey  
151 Ryders Lane  
New Brunswick, NJ 08901  
(732) 932-4500  
s.harris@rci.rutgers.edu

---

**ADVERTISING IN THE  
INTERNATIONAL JOURNAL OF BEHAVIORAL CONSULTATION AND THERAPY**

**The prices for advertising in one issue are as follows:**

**1/4 Page: \$50.00   1/2 Page: \$100.00   Full Page: \$200.00**

**If you wish to run the same ad in multiple issues for the year, you are eligible for the following discount:**

**1/4 Pg.: \$40 - per issue  
1/2 Pg.: \$75 - per issue  
Full Page: \$150.00-per issue**

**An additional one time layout/composition fee of \$25.00 is applicable**

**For more information, or place an ad, contact Halina Dziewolska by phone at (215) 462-6737  
or e-mail at: halinadz@hotmail.com**